

Mr. Jason Selking
Cargill AgHorizons
P.O. Box 1080
Monon, Indiana 47959

Re: Registered Operation Status,
181-12045-00040

Dear Mr. Selking:

The application from Cargill AgHorizons, received on March 16, 2000, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.1-2, it has been determined that the following dry fertilizer warehouse, located at 1462 West State Road 16, Monon, Indiana, is classified as registered:

- (a) one (1) enclosed storage warehouse with a maximum capacity to store 2,250 tons of fertilizer;
- (b) one (1) distributing conveyor with a maximum capacity to convey 100 tons of fertilizer per hour;
- (c) one (1) unloading leg with a maximum capacity to convey 100 tons of fertilizer per hour;
- (d) one (1) receiving drag conveyor with a maximum capacity to convey 100 tons of fertilizer per hour;
- (e) one (1) orbital blender with a maximum capacity to convey 100 tons of fertilizer per hour;
- (f) one (1) blended product leg with a maximum capacity to convey 100 tons of fertilizer per hour; and
- (g) one (1) loadout spout with a maximum capacity to convey 100 tons of fertilizer per hour.

The following conditions shall be applicable:

- (1) Pursuant to 326 IAC 5-1-2 (Visible Emissions Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:
 - (a) Visible emissions shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings.
 - (b) Visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) in a six (6) hour period.

- (2) Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions) the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located.

This registration is the first air approval issued to this source. The source may operate according to 326 IAC 2-5.1-2.

An authorized individual shall provide an annual notice to the Office of Air Management that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.1-2(f)(3). The annual notice shall be submitted to:

**Compliance Data Section
Office of Air Management
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015**

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Management (OAM) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

APD

cc: File - White County
White County Health Department
Air Compliance - Eric Courtright
Permit Tracking - Janet Mobley
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

Registration Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3).

Company Name:	Cargill AgHorizons
Address:	1462 West State Road 16
City:	Monon
Authorized individual:	Jason Selking
Phone #:	(219) 253-8549
Registration #:	181-12045-00040

I hereby certify that **Cargill AgHorizons** is still in operation and is in compliance with the requirements of Registration **181-12045-00040**.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name: Cargill AgHorizons
Source Location: 1462 West State Road 16, Monon, Indiana 47959
County: White
SIC Code: 5153
Exemption No.: 181-12045-00040
Permit Reviewer: Janusz Johnson/Aida De Guzman

The Office of Air Management (OAM) has reviewed an application from Cargill AgHorizons relating to the construction and operation of a dry fertilizer warehouse consisting of the following facilities:

- (a) one (1) enclosed storage warehouse with a maximum capacity to store 2,250 tons of fertilizer;
- (b) one (1) distributing conveyor with a maximum capacity to convey 100 tons of fertilizer per hour;
- (c) one (1) unloading leg with a maximum capacity to convey 100 tons of fertilizer per hour;
- (d) one (1) receiving drag conveyor with a maximum capacity to convey 100 tons of fertilizer per hour;
- (e) one (1) orbital blender with a maximum capacity to convey 100 tons of fertilizer per hour;
- (f) one (1) blended product leg with a maximum capacity to convey 100 tons of fertilizer per hour; and
- (g) one (1) loadout spout with a maximum capacity to convey 100 tons of fertilizer per hour.

Stack Summary

There are no stacks associated with the facilities at this dry fertilizer warehouse.

Enforcement Issue

The source has been constructed and operated without the proper air permit. The source will be referred for enforcement action.

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on March 16, 2000. Additional information was received on September 26, 2000, and October 17, 2000.

Emission Calculations

Cargill AgHorizons' process only involves the handling (receiving, storage and distribution) of already made or manufactured wax coated granulated fertilizer. The wax coating minimize the dustiness of the fertilizer.

The emission factors found in AP-42 Section 8.5.1 for Normal Superphosphates were not utilized in the calculations because this section involves processing, making and curing (reaction process) of the fertilizer which is still in the powder form, and thus emits more PM and gases.

The following emission factor found in AP-42 (Fifth Edition, 1/95) Section 13.2.4 Aggregate Handling and Storage Piles is more appropriate for the Cargill AgHorizons' process:

The particulate matter emissions created when the material is handled (dropped):

$$E_f = k * (0.0032) * [(U/5)^{1.3} / (M/2)^{1.4}]$$

where: E_f = emission factor (lb/ton)

k = particle size multiplier (0.74 assumed for aerodynamic diameter # 100 μ m, and 0.35 used for aerodynamic diameter # 10 μ m)

U = mean wind speed (assumed 1.3 mph)

M = material % moisture content (0.25%)

$$E_{f,PM} = 0.74 * (0.0032) * [(1.3/5)^{1.3} / (0.25/2)^{1.4}]$$

$$E_{f,PM} = 0.00745 \text{ lb/ton}$$

$$E_{f,PM10} = 0.35 * (0.0032) * [(1.3/5)^{1.3} / (0.25/2)^{1.4}]$$

$$E_{f,PM10} = 0.0036 \text{ lb/ton}$$

Particulate Matter (PM) Emissions:

$$\begin{aligned} \text{Load In} &= 100 \text{ tons/hr} * 0.00745 \text{ lb PM/ton} * 1 \text{ ton/2000 lbs} * 8760 \\ &\text{hrs/yr} = 3.3 \text{ tons PM/yr} \end{aligned}$$

$$\begin{aligned} \text{Load Out} &= 100 \text{ tons/hr} * 0.00745 \text{ lb PM/ton} * 1 \text{ ton/2000 lbs} * 8760 \\ &\text{hrs/yr} = 3.3 \text{ tons PM/yr} \end{aligned}$$

$$\text{Total PM Emissions} = 6.6 \text{ tons/year}$$

Particulate Matter 10 Microns or less (PM10) Emissions:

$$\begin{aligned} \text{Load In} &= 100 \text{ tons/hr} * 0.0036 \text{ lb PM/ton} * 1 \text{ ton/2000 lbs} * 8760 \\ &\text{hrs/yr} \\ &= 1.6 \text{ tons PM10/yr} \end{aligned}$$

$$\begin{aligned} \text{Load Out} &= 100 \text{ tons/hr} * 0.0036 \text{ lb PM/ton} * 1 \text{ ton/2000 lbs} * 8760 \\ &\text{hrs/yr} \\ &= 1.6 \text{ tons PM10/yr} \end{aligned}$$

$$\text{Total PM10 Emissions} = 3.2 \text{ tons/year}$$

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational

design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	6.6
PM-10	3.2
SO ₂	0.0
VOC	0.0
CO	0.0
NO _x	0.0

The potential to emit (as defined in 326 IAC 2-7-1(29)) particulate matter (PM) is greater than five tons per year but less than 25 tons per year. Therefore, the CWOP/OWOP source will be registered, pursuant to 326 IAC 2-5.1-2.

Actual Emissions

No previous emission data has been received from the source.

County Attainment Status

The source is located in White County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. White County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) White County has been classified as attainment or unclassifiable for all other regulated air pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

New (CWOP/OWOP) Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Potential To Emit (tons/year)
PM	6.6
PM-10	3.2
SO ₂	0.0
VOC	0.0
CO	0.0
NO _x	0.0

This CWOP/OWOP source is not a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new (CWOP/OWOP) source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This is the first air approval issued to this source.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR art 63) applicable to this source.

State Rule Applicability

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting), because it does not have the potential to emit more than one hundred (100) tons per year of any pollutant specified in the rule.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Visible Emissions Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

- (a) Visible emissions shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings.
- (b) Visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) in a six (6) hour period.

326 IAC 6-4 (Fugitive Dust Emissions)

The source is subject to 326 IAC 6-4 (Fugitive Dust Emissions). Pursuant to this rule the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located.

Conclusion

The construction and operation of this dry fertilizer warehouse shall be subject to the conditions of the attached proposed **Registration No. 181-12045-00040**.

